

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: )  
)  
**Carson et al.** )  
)  
Serial No.: **Unassigned** )  
)  
Filing Date: **Filed Concurrently Herewith** )  
)  
Title: **Method and System for Increasing** )  
**RF Bandwidth and Beamwidth in a** )  
**Compact Volume** )

**PRELIMINARY AMENDMENT**

Commissioner of Patents  
Box Patent Application  
Washington, D.C. 20231

Monday, March 4, 2002

Sir:

Prior to examination of the above-styled patent application, which is a continuation patent application of pending U.S. Patent Application Serial No. 09/785,032, filed on February 16, 2001 on behalf of the inventors James C. Carson, James K. Tillery and Sara Phillips, please amend the application as shown below and consider the appended remarks.

**AMENDMENT**

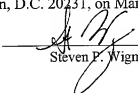
**In the Specification**

Please amend the specification as follows:

Please insert the following paragraph and heading as the first paragraph on page

1:

I hereby certify that this correspondence is being deposited with the United States Postal Service as Express Mail No. ET 491035419US in an envelope addressed to: Commissioner of Patents, Box Patent Application, Washington, D.C. 20231, on March 4, 2002.

  
Steven P. Wigmore, Reg. No. 40,447

--CROSS REFERENCE TO RELATED APPLICATION--

This application is a continuation of U.S. Application No. 09/785,032, filed February 16, 2001, entitled, "Method and System for Increasing RF Bandwidth and Beamwidth in a Compact Volume", the entire contents of which are hereby incorporated by reference.--

**In the Claims**

Please cancel Claims 1-11 before calculating the filing fee in the above-styled patent application.

**INFORMATION DISCLOSURE STATEMENT**

Applicants submit herewith Information Disclosure Statements (IDS's) and completed PTO-1449 forms in connection with the parent application. These IDS's list the references cited in the parent case. The Applicants remind the Examiner that copies of these references are not necessary since the present application claims priority Under 35 U.S.C. 120 to the parent case. See 37 C.F.R. § 1.98(d).

**SUBMISSION OF FORMAL DRAWINGS**

Applicants submit herewith ten sheets of formal drawings under a letter to the Official Draftsperson for the above-styled application. Applicants respectfully request that the informal drawings be substituted with these formal drawings.

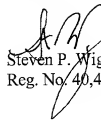
**REMARKS**

Applicants have amended the specification to indicate that the present application is a continuation application of pending U.S. Patent Application No. 09/785,032 filed on February 16, 2001. Applicants have canceled Claims 1-11. Claims 12-20 are now pending in the present application. The two independent claims are Claims 12 and 18.

**CONCLUSION**

Applicants respectfully submit that the above-styled continuation patent application, as amended, is in condition for examination and requests such action. If any issues remain that may be resolved by telephone, the Examiner is requested to call the undersigned at 404.572.2884.

Respectfully submitted,

  
Steven P. Wigmore  
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191 Peachtree Street, N.E.  
Atlanta, Georgia 30303  
404.572.4600  
K&S Docket: 06935.105031

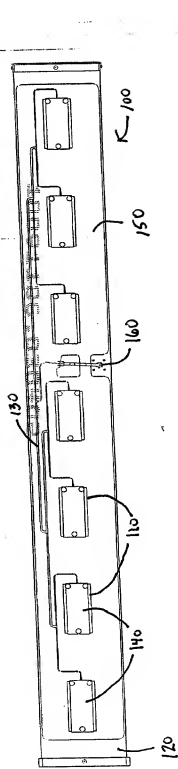


FIG. 1

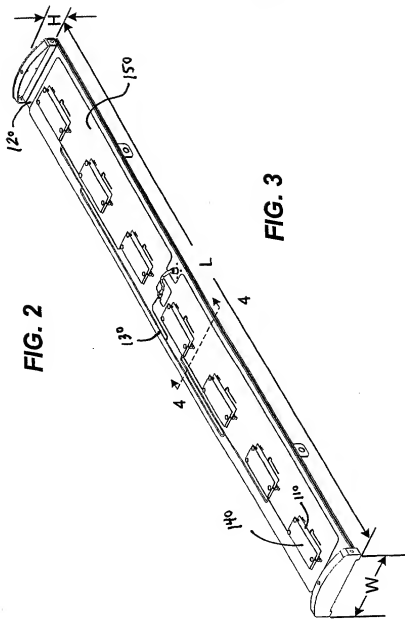
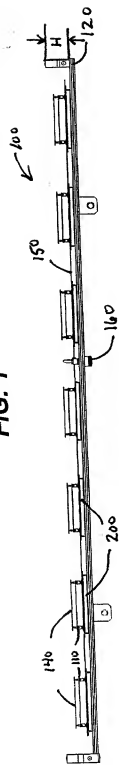


FIG. 3

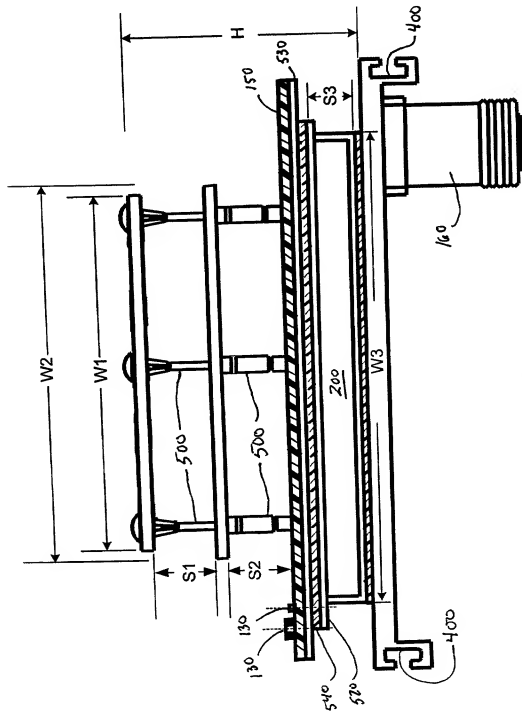


FIG. 4

140	Radiating Element
500	Spacer
110	Radiating Element
500	Spacer
150	PCB w/ Feed Network
530	Ground Plane with Slots
540	Planar Fastener
200	Cavity
540	Planar Fastener
120	Ground Plane

FIG. 5

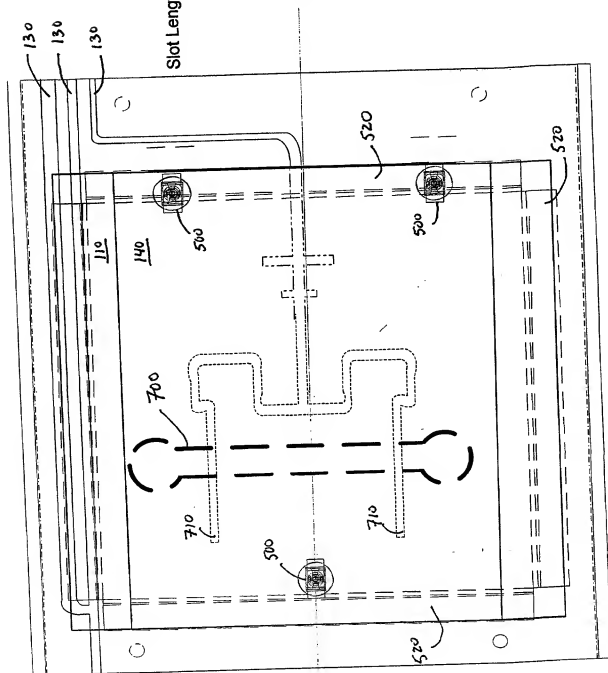


FIG. 6

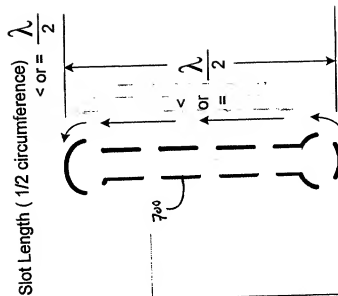
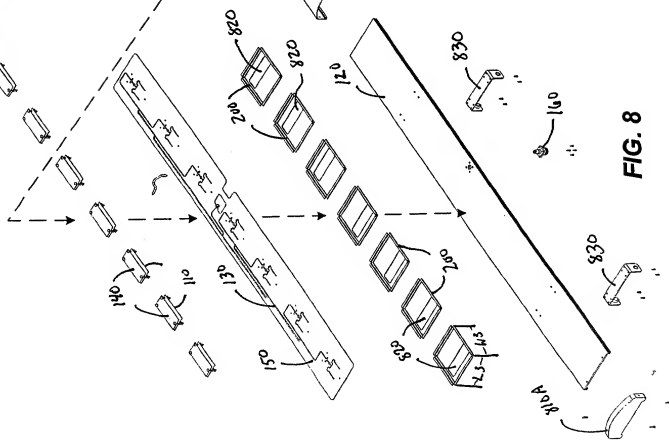
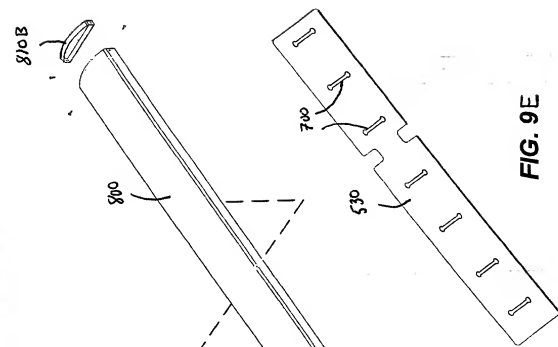
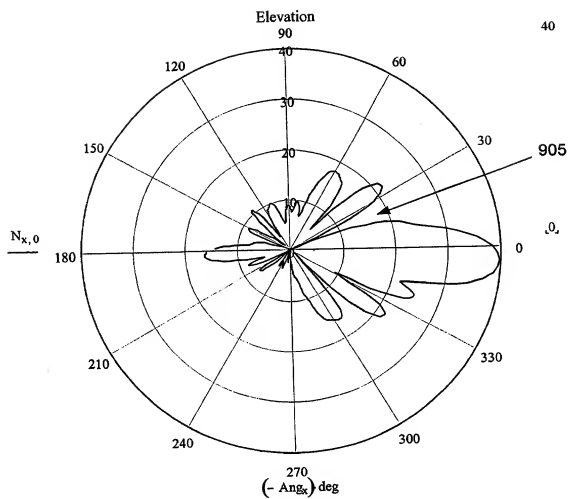


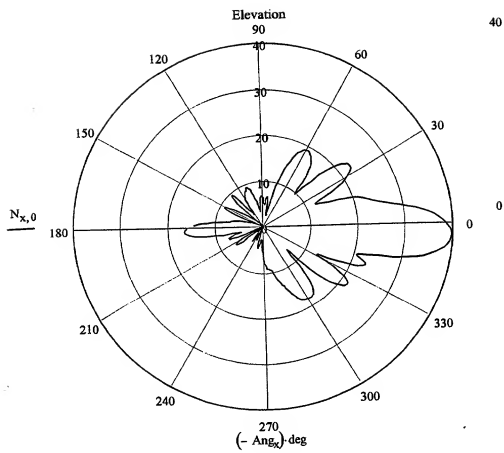
FIG. 7



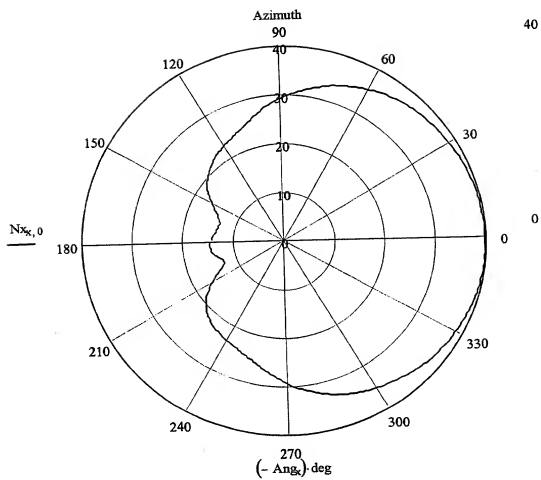


**FIG. 9A**

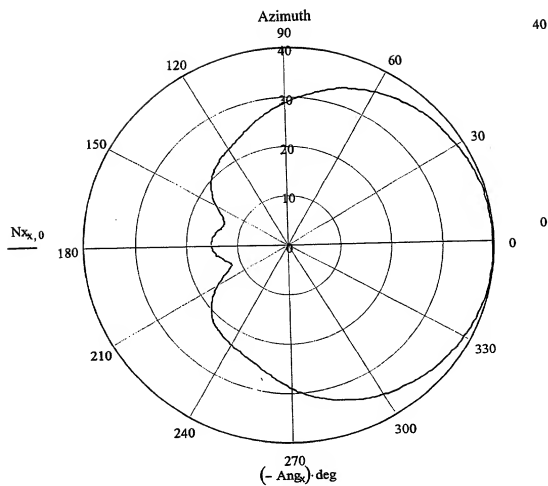




**FIG. 9B**



**FIG. 9C**



**FIG. 9D**

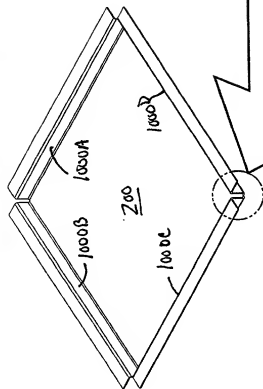


FIG. 10A

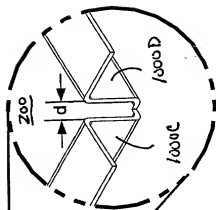


FIG. 10B

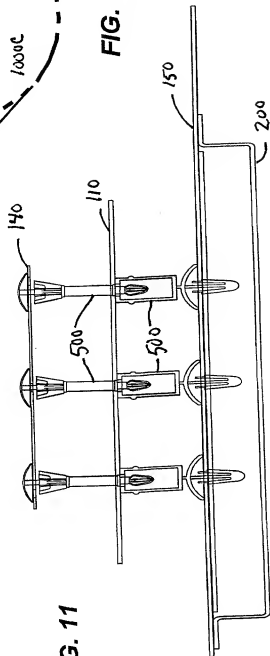


FIG. 11

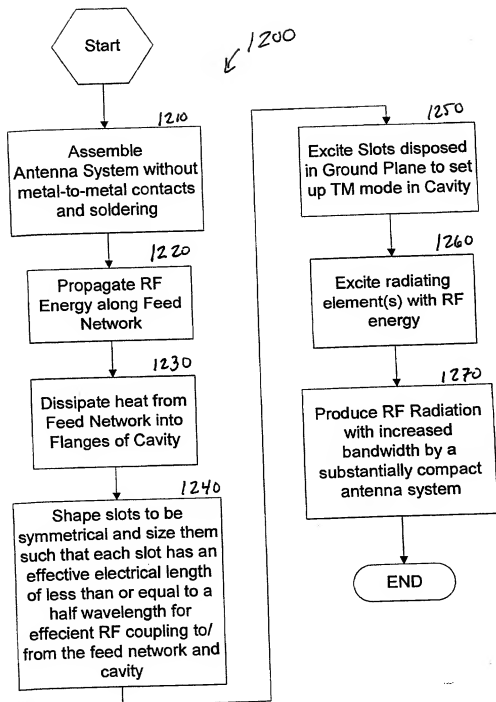


FIG. 12